Listing of Claims:

1. (Currently amended) A method for merging a pair of overlapping two-dimensional (2D) images, wherein the images comprise projections of a single three-dimensional (3D) scene, said method comprising:

selecting at least four feature points in the 3D scene within an overlapping region of the pair of 2D images,

finding 2D coordinates of points in both images corresponding to the selected feature points, the 2D coordinates being found with respect to original coordinate systems in the two images,

translating coordinates of the 2D coordinates found in the original coordinate systems of the two images by a chosen translation, wherein the translation is chosen to substantially minimize in a translated coordinate system, on average, numerical coordinate ranges of coordinate values of the 2D coordinates found,

determining first projective transformation parameters of a substantially optimal projective transformation in the translated coordinate system relating corresponding translated coordinates of the 2D coordinates found in the two images,

determining, as a function of the first projective transformation parameters, second projective transformation parameters of a projective transformation for application in the non-translated original coordinate systems of the two images, wherein determining the second projective transformation parameters comprises altering the first projective transformation parameters in the translated coordinate system using translation vectors, wherein the translation vectors ~~that~~ ensure an equivalence of (i) the projective transformation in the original coordinate systems and (ii) the projective transformation in the translated coordinate system is true, and

merging the two images into a single composite 2D image by (i) transforming one 2D image according to the projective transformation for application in the non-translated original coordinate systems of the two images into a transformed 2D image using the second projective transformation parameters and (ii) combining the transformed 2D

image with the other 2D image.

2. (Previously presented) The method of claim 1, wherein selecting comprises automatically selecting feature points with sufficient surrounding structure for accurately matching of the corresponding 2D coordinates in the two images.

3. (Previously presented) The method of claim 1, wherein translating comprises determining a translation for each image as an average of the 2D coordinates in the respective image.

4. (Previously presented) The method of claim 1, wherein determining the first projective transformation parameters of the substantially optimal projective transformation in the translated coordinate system comprises performing a singular value decomposition.

5. (Previously presented) The method of claim 1, wherein determining the first projective transformation parameters of the substantially optimal projective transformation in the translated coordinate system comprises performing a minimization of an error function.

6-12. (Cancelled).

13. (Previously presented) A computer program product comprising computer readable media having a set of instructions executable by a computer, the instructions being configured for merging a pair of overlapping two dimensional (2D) images that comprise projections of a single three-dimensional (3D) scene according to the method of claim 1.